

Application No.: 10/020605

Docket No.: 10010107-1  
PELT-27349

**REMARKS**

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-10 and 34-37 are pending in this application.

Claims 1, 6, and 34 have been amended.

Claims 11-33 have been canceled based on Applicant's election from a restriction requirement.

Claims 35-37 are new claims.

**Regarding the § 112 Rejections**

Claims 1-10 and 34 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

Applicant has amended claims 1, and 6 to remove the word "original" so that the term "data bit stream" is definite and particularly points out and distinctly claims the subject matter that the Applicant regards as the invention. Applicant respectfully requests that this § 112 rejection be withdrawn. Applicant respectfully points out that claim 34 did not have the term "original data bit stream" therein and respectfully traverses this § 112 rejection therefore. Applicant requests that the § 112 rejection be withdrawn.

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**Regarding the § 102 Rejection**

Claims 1, 2, 5-8 and 34 were rejected under 35 USC § 102(e) as being anticipated by Adam (U.S. Patent No. 6,628,725).

Applicant has amended claim 1 to recite, among other things that "the scrambler device scrambles groups of data in the data bit stream to statistically balance the number of

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logic low and logic high bits in the groups of data." Furthermore, claim 1 has been amended to recite that the ECC encoder device "receives the scrambled groups of data from the scrambler device." Applicant respectfully points out that Adam does not anticipate a scrambler device that scrambles groups of data in the data bit stream to statistically balance the number of logic low and logic high bits in the groups. In particular, the scrambler of Adam is used to break up long runs of binary zeros and ones that may exist in the data stream. It is not used to statistically balance the number of logic low and logic high bits within groups of data. Adam, col. 4, lines 4-9. Furthermore, claim 1 recites an ECC encoder device "that receives the scrambled groups of data from the scrambler device." Conversely, Adam teaches an encoder that first performs control character encoding and bit reordering 204, then scrambles bits 206, and then adds synchronization sequences 208 prior to sending data to an FEC encoder 210. As such, the Adam FEC encoder, which is somewhat different from an ECC encoder, does not receive the groups of scrambled data from a scrambler device. Instead, the Adam FEC encoder receives the groups of scrambled data from circuitry that adds synchronization sequences to the data bits at step 208. As such, Applicant respectfully submits that Adam does not teach or anticipate claim 1, as amended, and respectfully requests that the § 102 rejection be withdrawn and submits that claim 1 is ready for allowance.

Claims 2 and 5 are each dependent upon claim 1 and are therefore not anticipated for at least the same reasons as discussed above with respect to claim 1.

Independent claim 6, as amended, recites that "the scrambled data comprises "groups of data bits having a statistically balanced number of logic low and logic high data bits in each group." This recital is not taught or anticipated by Adam wherein the Adam scrambler is used to assure good DC balance by breaking up long runs of binary zeros or ones that may

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exist when the data stream is serialized, see col. 4, lines 4-9 of Adam. As such, Applicant respectfully submits that claim 6 is not anticipated by Adam because Adam does not teach or anticipate statistically balancing the number of logic low and high data bits and respectfully requests that the § 102 rejection be withdrawn.

Claims 7 and 8 are each dependent upon claim 6 and are therefore not anticipated for at least the same reasons as discussed above with respect to independent claim 6. As such, Applicant respectfully requests that the § 102 rejection be withdrawn.

Claim 34, as amended, recites a scrambler device programmed to convert a perceived bit stream "into groups of K scrambled data bits so as to statistically balance the number of logic low and logic high bits in each group." Applicant respectfully submits that Adam does not teach or anticipate statistically balancing the number of logic low and logic high bits in each group. Furthermore, applicant respectfully disagrees with the Examiner that "K1', K2', K3', D1, D2, and D3 (304 in Figure 3 of Adam) is without redundant bits and is not encoded prior to scrambling." In fact in Adam's discussion of Figure 3 in order for the characters of element 302 to become the characters of element 304 they must be encoded. The Adam specification states, "The exemplary data stream also contains three control characters denoted as K1, K2 and K3. *When the characters 302 have been encoded, as described in reference to step 204 in FIG. 2, the result is a 48-bit word 304 made up of six eight-bit words.*" Adam, Col. 4, lines 37-56. As such, Applicant respectfully submits that Adam does not teach or anticipate claim 34 and respectfully requests that the § 102 rejection be withdrawn and submits that claim 34 is ready for allowance.

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**Regarding the § 103 Rejection**

Claims 3, 4, 9 and 10 were rejected under 35 USC § 103(a) as being rendered obvious by Adam, in view of Kimmitt (U.S. Patent No. 6,738,935).

Claims 3 and 4 are each indirectly dependent upon claim 1, which recites, among other things, that "the scrambler device scrambles groups of data in the data bit stream to statistically balance the number of logic low and logic high bits in the groups." As discussed above in the § 102 discussion, Adam does not teach a scrambler as recited. Furthermore, Kimmitt though it does recite that there is a scrambler 54, does not teach, allude to or render obvious a scrambler that scrambles groups of data in the data bit stream to statistically balance the number of logic low and logic high bits in the groups. It is unclear in Kimmitt how the scrambler operates. As such, Applicant respectfully submits that Adam, in view of Kimmitt, does not teach, allude to, or render obvious claims 3 and 4 because neither Adam nor Kimmitt, alone or in combination, teach, allude to, or render obvious a scrambler device that scrambles groups of data in the data bit stream to statistically balance the number of logic low and logic high bits in the groups. As such, Applicant respectfully requests that the § 103 rejection be withdrawn and submits that claims 3 and 4 are ready for allowance.

Claims 9 and 10 are each indirectly dependent upon claim 6 which recites, among other things, that the scrambled data comprises groups of data bits have a statistically balanced number of logic low and logic high data bits in each group." Since Adam, in view of Kimmitt, does not teach, allude to, or render obvious converting a data bit stream into scrambled data, wherein the scrambled data comprises groups of data bits having a statistically balanced number of logic low and logic high data bits in each group, Applicant respectfully requests that the § 103 rejection be withdrawn and submits that claims 9 and 10 are ready for allowance.

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Regarding the New Claims

New claims 35, 36 and 37 have been added in this amendment. Since Adam requires encoding and/or byte reordering of data in a data bit stream prior to being scrambled (Adam, Figures 2 and 3, Col.3, lines 44-50, and Col 4, lines 37-56, applicant believes that the new claims are not anticipated or rendered obvious by the cited art and are each ready for allowance because they claim novel and useful serial communication related inventions.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: Oct 24, 2005

Respectfully submitted,

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